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ABSTRACT

A study was conducted to examine the feasibility, problems, benefits, and implications of the use of the mastery learning strategy in secondary marketing programs implementing the MarkED Model Program. The MarkED Model Program, begun in 1982, is a professional development activity for secondary marketing educators that uses a competency-based, mastery learning approach to instruction. The participants (now 50 in number from across the United States) are given initial and follow-up training over a period of 3 years to prepare them to implement the mastery learning approach. Participants also work to develop their local curricula to ensure consistency with the National Curriculum Framework. The mastery learning instructional strategy assumes that most students can successfully master the course objectives given varying amounts of time and instructional resources. Two sites of the MarkEd program were studied, one in the first year of implementation and one in the third year of implementation. Interviews with students, former students, teachers, administrators, and MarkED staff were conducted, along with literature review and observations over a period of 6 months. Two case studies were constructed along with a cross-case analysis. Data were analyzed primarily by using a pattern-matching technique with patterns from the emerging data compared to patterns from the literature and a pilot study. The information gained from the study is a detailed picture of the actual practice of the use of the mastery learning strategy in marketing education classrooms participating in the MarkED Model Program. The study found that although there are a few problems associated in implementing the strategy, the mastery learning strategy and the concepts of the MarkED Model Program provide opportunities for most students to achieve at mastery levels. (The cross-case analysis is included in this report. There are 13 references.) (Author/KC)

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TWO CASE STUDIES OF MASTERY LEARNING IN MARKETING EDUCATION: THE MARKED MODEL PROGRAM

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ABSTRACT

The purpose of this qualitative study was to examine the feasibility, problems, benefits and implications of the use of the mastery learning strategy in secondary marketing programs implementing the MarkED Model Program. Two sites were studied, one in the first year of implementation, and one in the third year of implementation. Interviews of students, former students, teachers, administrators, and MarkED staff were conducted, along with document research and observations over a period of six months. Two case studies were constructed along with a cross-case analysis. The cross-case analysis is presented in this document. Data was analyzed primarily using a pattern-matching technique (Yin, 1989) with patterns from the emerging data compared to patterns from the literature and pilot study. The information gained from this study is a detailed picture of the actual practice of the use of the mastery learning strategy in Marketing Education classrooms participating in the MarkED Model Program. The study found that although there are a few problems associated in implementing the strategy, the mastery learning strategy and the concepts of the MarkED Model Program provide opportunities for most students to achieve at mastery levels.

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Mastery Learning in ME

Introduction

There has been, in recent years, a movement toward improving the accountability of educational institutions for student achievement and learning. The need for more accountability resulted from numerous studies and national reports written in the 1980's that criticized the educational process in America. These reports revealed a lack of educational competence in high school graduates, resulting in a public outcry for change. One avenue for change is the improvement of the effectiveness of instruction, requiring educators to examine alternative instructional strategies. The purpose of this study is to examine the use of an alternative to traditional instruction, the mastery learning strategy as implemented by the MarkED Model Program.

The MarkED Model Program, in existence since 1982, is sponsored by the Marketing Education Resource Center of Columbus, Ohio. It is a national professional development activity for secondary Marketing Educators that utilizes a competency-based, mastery learning approach to instruction. The participants, now 50 in number from across the United States, are given initial and follow-up training over a period of three years to prepare participants to implement the mastery learning approach to instruction. In addition, participants work to develop their local curricula to ensure consistency with the National Curriculum Framework ("MarkED National Model," 1992).

The mastery learning instructional strategy assumes that most students can successfully master the course objectives given varying amounts of time and

instructional resources. Objectives for learning are determined and students are tested based on the objectives. If students do not achieve at pre-determined competency or mastery levels, additional instruction or remediation is provided until mastery is demonstrated (Bloom, 1974).

A great deal of research has been conducted to determine the cognitive benefits that implementation of mastery learning strategies mastery learning provides. These studies show that at least 80 percent of students can achieve competency levels under mastery conditions at the same level as the upper 20 of students under traditional learning conditions. Later studies in the 1980's also show similar gains (Bloom, 1974; Dunkleberger & Knight, 1981; Hobbs & Bailey, 1987; Lueckmeyer & Chiapetta, 1981; Taylor, 1983; Whiting & Render, 1987). A body of evidence of the impact of mastery learning strategies in the 1970's and 1980's reported the affective or emotional aspects of learning strategies (Ames & Archer, 1988; Block, 1973; Burkman & Brezin, 1981; Grossman, 1985; Heikkinen & Dunkleberger, 1984; Taylor, 1983).

Statement of Purpose

The purpose of this qualitative study was to develop two case studies of MarkED Model Programs utilizing the mastery learning based instructional strategy in secondary marketing education programs. The case studies examined the feasibility, problems, benefits and implications of the mastery learning instructional strategy at two research sites at two high schools. The major question to be addressed was: What are the benefits, problems, implications and feasibility of the

utilization of the mastery learning strategy in Marketing Education using two MarkED Model Program participants?

Initial sub-questions were: (1) How does the teacher's implementation of mastery learning affect the teacher's role and responsibilities? (2) What role do administrators and colleagues play in the implementation and support of the mastery learning strategy? (3) How does utilization of a mastery learning strategy impact students?

Conceptual Framework

Areas identified in the pilot study and a review of the literature guided the construction of the conceptual framework. The conceptual framework deals with relevant factors affecting students, teachers, and administrators.

The first student area, attitudes toward learning, is outlined in a studies by Wagner and Jones (1973) and Ames and Archer (1988). The authors indicated that students taught using mastery learning strategies had greater interest and better attitudes toward subject matter as compared to students in other classes. They also reported that students used more effective learning strategies.

The second student area, learning orientation, was outlined by Ames and Archer (1988) in a study of students in classes utilizing mastery learning strategies. According to the authors, students had a preference for challenging tasks and a belief that success was attributable to effort and not innate ability.

Class climate was the third area for investigation that emerged from the literature. Grossman (1985) revealed that classes using mastery learning

strategies had more student involvement, better rapport between teacher and students, and less tension than traditional classrooms.

Learning responsibility was another factor that had impact on students. A finding in the pilot study was that a great deal of the responsibility for learning rested with the student. Learning responsibility involved time usage and student choice regarding classroom projects. Bennett (1978) asserted that high school students are emotionally and intellectually ready for a less structured learning environment. This assertion has implications for student responsibility as well as class climate.

Goal orientation, the last student factor, was another area in the initial framework to be examined. Ames and Archer (1988) asserted that classroom goal orientation may result in changes in motivational patterns for students.

The conceptual framework areas regarding teachers include: learning responsibility; role change; program management; and level of support.

The first area of the initial conceptual framework for teachers had to do with learning responsibility. This area was uncovered in the pilot study, with students taking more of the responsibility for their learning.

The second area for teachers, role change, was an area addressed in the pilot study findings. A change in the role of students and teachers was revealed in the pilot study; the teacher became more of a facilitator of students' learning, with increased responsibility and accountability given to students.

The third area, goal orientation, came from the Ames and Archer (1988) study explained earlier in relation to students.

The fourth area, program management, was outlined by Dunkleberger and Knight (1981), Heikkinen and Dunkleberger (1985), Lueckmeyer and Chiapetta (1981), and Okey (1974). The authors pointed out an increase in workload for instructors implementing mastery learning.

The fifth area in the initial framework, communications with peers/administration, was included because of information reported in the pilot study that communication with peers was not always positive

The last area for teachers in the framework was the sources of support that teachers receive for their program implementation efforts. Hobbs and Bailey (1987) pointed out the importance of administrator support of teachers implementing the mastery learning strategy. According to the pilot study, in addition to administrator support, support from colleagues did not always occur.

Class climate was a factor that was explained in relation to students, but also had teacher effects.

The conceptual framework areas regarding administrators related to communications, the level of support, expectations, and understanding.
The two areas of expectations and support were outlined in the Hobbs and Bailey (1987) study of administrators and mastery learning. The authors stated that student achievement was positively related to identified outcome-based practices encouraged by the principal, and the principal's level of expectation accounted for an increase in student achievement.

An understanding of the program by administrators was included in the

conceptual framework, because a teacher in an interview in the pilot study revealed that some administrators did not understand the program of mastery learning.

Approach

The case studies of mastery learning in two secondary marketing education program participating in the MarkED Model Program explored the utilization of a mastery learning strategy. Two sites were chosen because of the length of time of the teachers' participation in the program, the difference in the student bodies, and their proximity to each other and the researcher.

One site, referred to as River City High School, is located in a large metropolitan area of over a half million people. It is characterized by a student body of 1300 students, a large percentage of minority group members, and a large percentage of economically disadvantaged students.

The second site, referred to as Old West High School, in a city of over 100,000 people, also had about 1300 students. It was one of three high schools in the city characterized by a predominantly white, middle-class student population.

The teacher participants in this study were both veteran teachers, each with about twenty years of experience in education. The teacher at River City High School, Jan, was in her third year of participation in the MarkED Model Program. The teacher at the Old West High School site, Ron, was just beginning his first year in the program.

Both Ron and Jan were interviewed using a prepared set of questions in October and later in March. Informal interviews were conducted monthly over the

course of the six month observation.

The teachers at both sites were asked to choose five students that were representative of their class population. These students were interviewed in October and later in March. Other students were interviewed on an informal basis throughout the study.

Other interviews were conducted with one former student from the River City High School site, administrators at both sites, and current and former Model Program Project Directors and the current President of the Marketing Education Resource Center (MarkED).

In addition to the interviews, data collection activities over a six month period included document research and classroom observations. Document research included teacher journals, written documentation of classroom observations by principals, classroom assignment sheets, calendars, and student evaluations.

Information was coded and identified and placed into broad category distinctions using a computer program, Ethnograph, designed to aid in the analysis of qualitative data. Categories were then analyzed using a time-series analysis and a pattern matching technique (Yin, 1989).

Cross-Case Analysis

Differences in the cases were very apparent. Those differences included teachers, student demographics, aptitudes, and attitudes of students. Even with these differences there were similarities at both sites.

With both teachers I observed a change of role on student-directed

days from teacher-directed days. This role change involved giving students more freedom in directing their own learning and time usage.

In general, most of the students appreciated the freedom and choice on the student-directed days at both sites; however, the Old West High School site had one student that did not like the freedom and choice. She wanted more direction and guidance on student-directed days, characteristic of a traditional classroom.

Both of the teachers at both sites spoke of their administrative duties as being enormous. Ron seemed to be more overwhelmed by the task than Jan, perhaps because she was in her third year and in fact, had more resources from which to draw.

Program orientation was an area where there was some difference. Jan understood the orientation process to the program, and developed a method to promote the program to her students. There was no confusion in my observations with her students regarding the system, grading, or the process. On the other hand, there seemed to be much confusion with Ron's students initially, although those problems seemed to be taken care of as the year progressed.

Both teachers seemed to have a good source of support in their administrators. All of the administrators saw the participation in the program as very positive.

Both of the teachers felt that their counterparts at the different high schools in the city were not supportive of the program. There seemed to be some negative feelings toward the program in both cities. Observations of the

classrooms at both sites revealed a great deal of student involvement. Observations at the River City High School site revealed a great deal of student involvement in class discussions. Students at the Old West High School site had a great deal of involvement in democratically resolving program management issues as well as being involved in classroom discussions. Interviews and observations at both sites characterized the atmosphere as relaxed.

Both classrooms were very unstructured on student-directed days. Students were involved in a number of different activities, often working alone or in groups.

The Administrators

At both sites, the administrators anticipated that both programs could serve as models for the rest of the school. The hope was that other teachers would view the programs and adopt the strategies for use in their own classrooms. At both sites the hope of the administrators was that individual teachers would take the initiative to adopt the strategies, instead of making the adoption of the strategies an administrator mandate.

At both sites administrators supported the project monetarily and in other ways, although as stated earlier, it was the individual teachers who chose to investigate and later initiate the program.

The Students

Students seemed to be interested in the subject matter at both sites with a few exceptions. Most students agreed that choice of projects on student- directed days and the freedom on those days increased their interest.

The repeatable testing component and the mandatory mastery level of achievement provided a powerful motivator for students at both sites. Students were motivated to put more energy into studying for their tests to avoid taking the second or third versions of the test in order to reach mastery levels. In effect, the setting of the mastery level for all students and the repeatable testing component motivated most students to achieve at mastery levels. In contrast, for students at both sites that normally received above average grades, the setting of the competency level at 80 percent was not particularly motivational because they were accustomed to setting higher standards for themselves.

Another factor that affected students was the area of testing and evaluation. Students at both sites agreed that the testing and evaluation was fair to the students, with one exception. A student at the Old West High School site, wanted more differentiation in the grading so that only the top students would receive "A's."

An outcome of using mastery learning strategies seemed to effect students' belief in their ability to learn. Some students at both sites experienced some change in their belief of their ability to learn. They experienced success in the program and were proud of their efforts toward the projects that were required to achieve mastery for the quarter. Evidence from the two sites showed that some students felt more successful. There was also the feeling of most students that success followed effort instead of attributing success to innate ability.

There were differences in attitudes regarding the perception of the difficulty of the courses at the two sites. Students at the Old West High School perceived the

level of difficulty of the program to be greater than the River City High School students. Repeatedly students at Old West spoke of studying more and learning more information than in their other classes.

One of the areas of student learning orientation examined how responsible students felt they were for their learning. Students at both sites felt that it was the students' responsibility for learning information.

Another area of learning orientation was the kind of tasks students chose on some student-directed days. In my observations and interviews, students did not necessarily prefer choosing more challenging tasks. A few students at both sites became involved in the more challenging projects. What seemed to be more influential in student project choice was their level of interest in the projects.

Study habits were part of the learning orientation area that underwent some change at both sites. Some students at both sites indicated they had modified their study habits in order to achieve mastery in the class. These student modifications seemed to occur more at the Old West High School site where students reported studying more for tests and studying every day instead of before a test.

A few students at both sites indicated their change in study habits had affected their other classes. Because of modifying their study habits and being successful in their Marketing class, they used the same techniques to study for their other classes.

Most of the students at both sites stated that they felt they learned more because of the expectation of mastery. Students also mentioned the fact they were interested in the subject matter and that helped in the learning of the material.

The accountability for every assignment also helped them learn more information.

Accountability for classroom time also seemed to be very important. At both sites on student-directed days I saw most students involved in learning activities. There were students that were not involved in learning activities 100 percent of the time, but on the whole, over a period of time, students seemed to take the responsibility for their learning and their time usage.

Conclusions

At the beginning of the study a conceptual framework was constructed from information gathered from a review of the literature and results from the pilot study. This conceptual framework served as a guide to gather information without confining information to the framework. As the data were gathered, themes developed, some of which reinforced the framework, and some of which were contrary to the framework. Themes were also revealed that were unique to the cases.

Authors of earlier studies that were used to construct the conceptual framework revealed that students who were taught using mastery learning strategies have greater interest and better attitudes toward subject matter as compared to students in other classes (Wagner and Jones, 1973; Ames and Archer, 1988). The authors also reported that students used more effective learning strategies (Ames and Archer, 1988).

Evidence to support these assertions occurred at both sites.

1. Most students at both sites stated that they were interested in the subject matter.

2. Some students (not all) at both sites felt that they experienced a change in their ability to learn because of success experienced in the program.

3. Evidence from both sites indicated that some students felt more successful, which was also consistent with a 1973 (Taylor) study that found that students taught using mastery strategies had a consistent feeling of success as they progressed through the learning tasks.

4. Some students at both sites indicated a modification in their study habits in order to achieve mastery in the class.

The second area of the conceptual framework dealing with students' changes in learning orientation, was outlined by Ames and Archer (1988) who stated that students have a preference for challenging tasks and a belief that success was attributable to effort and not innate ability. Students at both sites felt that their success was due to effort and not ability. This findings would support the Ames and Archer study. Evidence from the case could not support the assertion that students had a preference for challenging tasks.

The third area of the conceptual framework dealing with students related to class climate. Grossman (1985) revealed that classes using mastery learning strategies had more student involvement, better rapport between teachers and students, and less tension than traditional classrooms. In the present study, a great deal of student involvement, good rapport between teachers and students, and little tension was evident.

The conceptual framework assertion from the pilot study, learning

responsibility, was supported by the evidence in the present study. Students at both sites had strong feelings of responsibility for their own learning and most used their student-directed day time allocation well.

The last area of the conceptual framework dealing with students, goal orientation, based on the Ames and Archer study (1988) that classroom goal orientation may result in changes in motivational patterns for students. The evidence from the present study supported this assertion. The repeatable testing and mandatory mastery level of achievement provided powerful motivators for most students at both sites.

There was evidence concerning students at both sites that was contrary to the evidence in the conceptual framework.

1. As mentioned earlier, there was not evidence to support the assertion that students preferred more challenging tasks.

2. Wagner and Jones (1973) found that students reported greater interest in the subject matter because of mastery learning techniques. The researcher's perception was that student interest was enhanced by student choice of projects on student-directed days and not necessarily by the mastery learning strategies.

3. For students at both sites that normally received above average grades, the setting of the competency level at 80 percent was not particularly motivational, because they were accustomed to setting higher standards for themselves. This was contrary to Ames and Archer's (1988) finding. The authors reported that classroom goal orientation may result in changes in motivational patterns for students.

Evidence from the cases that was not revealed as part of the conceptual framework or in the review of literature was uncovered.

1. Not all students liked the mastery grading system; one student desired more differentiation for top students.

2. Students at one site reported studying more, learning more information, and feeling more challenged than in their other classes.

3. A few of the students at both sites indicated that a change in study habits for their marketing class had improved their study habits for their other classes.

4. For students who experience repeated failure in their efforts to reach mastery, the feelings of success that Taylor (1973) reported do not occur.

5. Given the diverse nature of the two student body groups, there were no major differences between students at Old West High School and River City High School with regard to their acceptance and use of the learning strategies.

For teachers, the evidence from the cases supported the conceptual framework in the following areas.

1. A change in the role of the students and teachers in the classroom was found at both sites, with the teacher becoming more a facilitator of learning and increased responsibility and accountability given to students. This was consistent with pilot study findings.

2. Increased program management responsibilities for teachers at both sites were reported consistent with earlier studies (Okey, 1974; Dunkleberger and Knight, 1981;

Heikkinen and Dunkleberger, 1985; Lueckmeyer and Chiapetta, 1981).

3. There was evidence to support pilot study findings that communication with peers about the program and mastery learning was not always positive. Misunderstandings that existed with other teachers within the districts regarding mastery learning usage was reported at both sites.

4. Hobbs and Bailey (1987) pointed out the importance of administrator support of teachers implementing mastery learning strategies. At both sites, there was evidence of strong support for participation in the program by administrators.

Bennett (1978) reported that high school students are emotionally and intellectually ready for a less structured environment. This was true for most students; however one student did not like the freedom and choice and much preferred a traditional classroom.

New information uncovered in the cases regarding teachers included the following.

1. Program orientation was very important to the successful implementation of the program. Since most students could not recall being enrolled in a class that used mastery strategies, orientation was very necessary.

2. The classrooms in both cases appeared unstructured because of the nature of student-directed days.

The conceptual framework was supported by the following evidence with regard to administrators.

1. Hobbs and Bailey (1987), in their study of administrators and mastery

learning revealed that student achievement was positively related to identified outcome-based practices encouraged by the principal. Evidence from the two case studies revealed that the principals supported the project monetarily and hoped the programs would serve as models for the rest of the school.

Evidence from the two cases that was contrary to the conceptual framework included information regarding the administrators' understanding of the program. Administrators who were interviewed had a firm understanding of the program, contrary to evidence revealed in the pilot study.

Implications and Recommendations for Practice

One important implication that evolved from this study is the use of the repeatable testing component. Repeatable testing seemed to be a powerful motivator for student achievement of mastery. Students did not want to spend time taking a test a second time, and because of this some students modified their study habits.

The setting of the level of mastery for which all students are held accountable also seemed to be a positive aspect of the program. For some students that are not intrinsically motivated to achieve, an extrinsic motivator is preferable to none at all.

The student-directed day that utilizes the student projects also seemed to be very important.

Teachers in this study who implemented mastery learning strategies received assistance to make the implementation of the strategies more feasible. Teachers at both sites received training and orientation and had access to MarkED materials to

facilitate their implementation of the program over a period of three years. In addition, teachers spent many hours on their own prior to the start of the first year of implementation in planning activities. Even with all of this assistance and preparation, teachers reported feeling overwhelmed in the initial phases. Other teachers implementing mastery learning strategies will need much preparation and planning time.

Another implication of the findings of this study is that students need some orientation to the process of mastery learning and the special requirements of the MarkED Model Program. In the mastery learning classroom, there could be many differences in grading, testing and evaluation, and philosophy. Students need to understand the concepts of the strategy and to understand the philosophy before starting the coursework.

Another key component to successful implementation of mastery learning strategies is the support given teachers who use the strategies. Both administrators supported the philosophy that all students can learn and also supported the mastery learning strategies. With the increased workload for teachers involved, support of the program by administrators helped to make implementation less difficult.

Mastery learning as implemented by the MarkED Model Program is not an educational "cure-all." For most students the strategies provided an opportunity to succeed in the classroom, while also providing student choice and responsibility. Mastery learning and programs like the MarkED Model Program are alternatives to traditional education and provide opportunities for educational improvement.

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